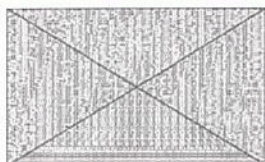


To: Larson, Robert[larson.robert@epa.gov]
From: Algae Biomass Organization
Sent: Thur 1/29/2015 9:37:35 PM
Subject: Algae InSight: Preparing Algae for 2015



Algae InSight

Edition: January 29, 2015

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Executive Director's Report

If you tuned into President Obama's State of the Union address you know that we are in for an energetic debate in Congress on how to best address the nation's challenges.

As 2015 gets underway the Algae Biomass Organization is taking a leadership role when it comes to educating elected officials and agency staff about the potential of algae to address many of our problems in energy, the environment and economic development.

Last week a number of ABO board members and members of the Executive Policy Council were in Washington, DC, meeting with their elected representative in the House and Senate, as well as Administration officials. Topics of discussion included the rapid innovation in the algae industry, job growth related to a number of new algae products and the importance of robust policy support.


One benefit of our outreach: support for carbon utilization technologies on Capitol Hill continues to grow. U.S. Senators Sheldon Whitehouse (D-RI) and Joe Manchin (D-WV) wrote a letter to Ernest Moniz, Secretary of the Department of Energy, and Gina McCarthy, Administrator of the Environmental Protection Agency supporting the use of carbon capture and utilization (CCU) technologies in climate and energy policy.

The Senators noted:

"Companies and research institutions across the country, including innovators in Rhode Island and West Virginia, are developing a wide range of CCU technologies. As your agencies explore ways to reduce emissions, we urge you to support these efforts and promote innovative CCU technologies that will create jobs, save consumers money, and safeguard our environment."

The Environmental Protection Agency is scheduled to issue its revised rules for carbon dioxide emissions this summer, and ABO is working hard to make sure that the role of carbon utilization is explicitly mentioned as an approved method for states to meet their emissions targets.

Another policy discussion for the new Congress will likely be the



Renewable Fuel Standard. It comes just at the algae industry is poised to make an impact, especially with this month's exciting news that Algenol's algae-derived fuels have been certified to meet the requirements of the Renewable Fuel Standard, making Algenol eligible for the Renewable Identification Numbers (RIN) needed to begin commercial sales.

This regulatory approval is an enormous milestone for Algenol and for the algae industry in general. As part of its evaluation the EPA found that Algenol's **algae-derived fuels come with an astonishing 69% reduction in greenhouse gas emissions when compared with gasoline.**

As 2015 unfolds ABO will continue to engage with key policymakers on developments ranging from tax reform to climate change to ensure the algae industry can make a maximum difference in the nation's energy and environmental security.

With your support we can make sure the debate in 2015 includes policies that can help the industry grow.

Matt Carr

Executive Director

Algae Biomass Organization

Don't Forget to Renew Your ABO Membership!

ABO membership renewals for calendar year 2015 were due January 15th. Just a reminder that renewals must be received by January 31 to prevent a lapse in your membership!

Remember, only members in good standing may take advantage of the many benefits of ABO membership, including:

- Support from ABO executive staff
 - ABO website member's-only access to reports and presentations
 - Participation in all ABO policy initiatives
 - Regular industry updates via the website and newsletter
 - Opportunity to participate on ABO committees
 - Results from annual ABO industry survey
 - Access to ABO technical standards
 - Participation in on-going ABO educational activities
 - Access to proprietary ABO membership directory
-

And with preparations for the 2015 Algae Biomass Summit In Washington, DC, already ramping up, you'll want to be sure to have your 2015 membership in place to qualify for additional member benefits, including:

- Discounts on Summit registration and exhibit booths ([Booths now available and going fast!](#))
- Priority consideration for Summit speaking slots for Gold, Platinum and Diamond members (Call for papers opens soon!)

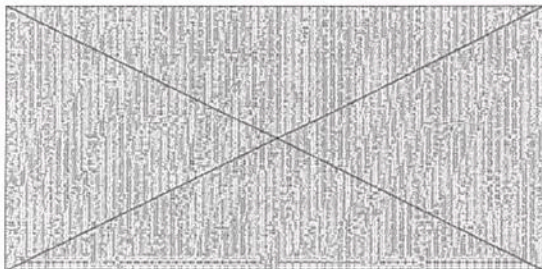
View full benefits and membership options at:

<http://www.algaebiomass.org/membership/prospective-member-information/membership-levels-benefits/>

If you need additional payment information or if you have any questions, please email us at bscheevel@algaebiomass.org.

We value your continued membership and support of the Algae Biomass Organization!

Call for Abstracts - 2015 Algae Biomass Summit



The Algae Biomass Organization is now accepting abstracts and proposals for the **2015 Algae Biomass Summit**, being held in Washington, DC, September 30-October 2. Submit your own proposals for keynote speakers, panel presentations and poster sessions at the event, the world's largest algae industry conference.

Speaking opportunities for the Summit are highly competitive, making the submission of high-quality abstracts before the March 16, 2015 deadline essential.

Submit your abstracts at <http://www.algaebiomasssummit.org/?page=Abstracts>.

Funding Opportunity: OPEN 2015

Energy Secretary Ernest Moniz announced this month that the Department of Energy's Advanced Research Projects Agency - Energy (ARPA-E) is issuing its third open funding opportunity announcement, OPEN 2015, for up to \$125 million.

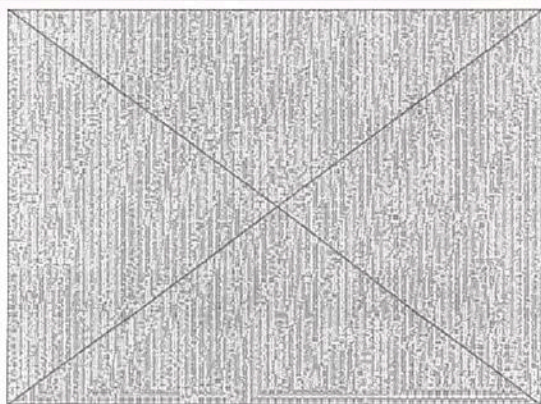
OPEN 2015 will support energy research and development projects from America's top innovators for disruptive new technologies in transportation and stationary applications.

Applications are being accepted through February 20, 2015. ABO members could potentially qualify for several funding categories, including:

- Biomass Production Technologies that improve biomass characteristics, such as yield and sustainability, and decrease cost of production and/or water use.
- Biofuel Production - Biological Methods Technologies that utilize a biological agent in one or more principal step(s) of feedstock conversion to fuels.
- Carbon Capture, Use, And Storage Technologies for carbon capture, use, and storage.

More information about this opportunity, and application resources, is available at [the ARPA-E Funding Opportunity Exchange](#).

Algae Makes Inroads with Congress and White House



Last week, several members of ABO's board, its membership and Matt Carr, executive director, met with members of Congress, staff, agency representatives, and even President Obama's chief advisor for climate. Our goal was threefold:

First, educate them on the benefits of algae to offer sustainable, cost-competitive and high-performing solutions to food, energy and industrial uses.

Second, to push for recognition by the EPA that carbon utilization is a viable emissions reduction pathway under the new Carbon Plan.

Third, to broadly advocate for both tax and regulatory policies that will benefit members.

Our messages were well received by both sides of the aisle, as well as President Obama's chief climate advisor, and we are optimistic that, with continued effort, we can continue to influence

regulatory and tax policies to help accelerate the commercialization of end products derived from algae.

We will keep you posted on progress in the coming weeks and months.

Pictured: Representatives from the Algae Biomass Organization after a meeting at the White House.

E2 Advanced Biofuel Market Report 2014

Environmental Entrepreneurs (E2)'s fourth annual Advanced Biofuel Market Report was made public last week and many ABO member companies can be found within the report.

The Advanced Biofuel Market Report catalogs the growths and challenges in the advanced biofuel industry, estimating the capacity of the industry through 2017. The scope includes advanced biofuel producers and related companies in the United States and Canada achieving at least a 50% reduction in carbon emissions.

According to the report, "A notable trend in 2014 has been innovation in some companies' paths to commercialization. While many companies continue to commercialize with a large biorefinery, other companies are looking at more distributed generation models, which are less capital and feedstock intensive."

The Advanced Biofuel Market Report estimates that advanced biofuel capacity in the U.S. will grow from about 800 million gallons of gasoline equivalent in 2014 to more than 1.7 billion gallons equivalent in 2017 on the high end.

[Check out ABO's blog post to see which algae companies were called out in the report.](#)

Submit your Research to Industrial Biotechnology Journal

Submit your research on algal technologies for publication in Industrial Biotechnology! The Algae Biomass Organization is working with the editors of Industrial Biotechnology to assemble a special issue focused on advances in algal biomass and CO2 utilization technologies for the production of biofuels and biobased products.

If you are interested in submitting a paper for consideration and peer review we want to hear from you! We will need commitments from authors by the end of January 2015.

Please send us a tentative title and brief description of your paper to info@algaebiomass.org.

If accepted, manuscripts would have to be complete by March 1st, 2015. We are aiming for publication in the August 2015 issue.

This is also a unique chance for the industry to demonstrate broad commercialization progress in an authoritative, peer-reviewed setting. We look forward to your submissions!

Graduate-level Marine Algae Course-Summer 2015

Spend Summer 2015 on the San Juan Islands with nearly 625 species of marine macroalgae!

The University of Washington's [Friday Harbor Laboratories](#) is offering a graduate-level course titled [Marine Algae](#).

The Marine Algae course will consist of extensive field work that will be enhanced by lectures as well as laboratory instruction in the observation and interpretation of morphological and anatomical traits that define species and/or higher taxonomic groups.

Students will acquire practical experience in specimen collection, preservation, and databasing, light microscopy, DNA isolation, amplification and sequencing, and computational approaches to phylogeny reconstruction. The use of combined approaches will be emphasized to answer basic questions; individual and group projects will use morphological, ecological and molecular data to assess the diversity of algal populations and interpret that diversity in its ecological context.

Learn more about labs, application deadlines, tuition and funding opportunities [here](#). Funding is also available through the [PSA's Hannah Croasdale Fellowships](#).

Instructors: Tom Mumford, Marine Agronomics LLC, tmumford@uw.edu, and Brian Wysor, Roger Williams University, bwysor@rwu.edu

[Submit your application before February 1, 2015!](#)

Green Revolution 2.0-2015 Food and Fuel for the 21st Century Symposium

The world is in need of another agricultural revolution - the Green Revolution 2.0 - which will provide stress tolerant food crops to feed our growing populations, and advanced biofuels to power our

continued economic growth and human innovation. This symposium will feature top researchers from around the world presenting the latest research in genetics, synthetic biology, bioinformatics, economics, and bio-manufacturing of algae and plant-based biomass to propel the Green Revolution 2.0 forward.

General Registration Fee \$200

Organizer: Food & Fuel for the 21st Century and California Center for Algae Biotechnology - Travis Johnson, 858 534-6383, tij002@ucsd.edu

Website: www.regonline.com/ff212015

Member News

[Algenol launches algae fuels project in India](#)

Naples News-Press

[4 Minutes with... Tim Burns, Co Founder, Board Member, Bioprocess Algae](#)

Biobased Digest

[Algenol achieves 'milestone' EPA approval](#)

News-Press.com

[It's Your Business: Century 21 cuts ribbon](#)

Naples Daily News

[Diversified Technologies, Inc. Installs PEF System at ASU for AzCATI](#)

Albuquerque Business First

[Revolutionizing Omega-3: When a Galilee kibbutz met Startup Nation](#)

Haaretz

Industry News

[Algae to Recycle Metals and Biofuel from Contaminated Mine Water in Cornwall](#)

Waste Management World

[Wastewater treatment technology for developing countries](#)

Filtration + Separation

[ISGP enters into the Algae market](#)

Greentech Lead

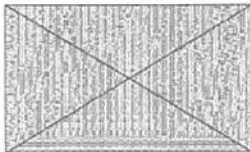
[Algae.Tech making inroads into greater China region](#)

Proactive Investors Australia

[Algae may help support heart after severe attacks, researchers say](#)

Newsday

Join ABO



As we continue to promote the development of commercial markets for sustainable products derived from algae, we invite you to join us in our efforts by becoming a member of the Algae Biomass Organization. As the trade association for the industry, we act as a voice for the industry to the public, media and policy makers while also representing individuals and companies across the value chain. As an ABO member, you'll have access to a wide range of services and information, including:

- Representation in ABO's policy initiatives with policy makers in Congress and at key federal agencies, including the USDA, EPA and DOE;
- Regular industry updates and issue alerts via member-only communications;
- Opportunity to participate in ABO committees;

- Results from our annual industry survey;
- Access and input to the ABO's Technical Standards documents;
- Participation in members-only events, webinars, briefings and networking opportunities;
- Discounted registration for ABO-hosted industry events.

For questions about membership in the Algae Biomass Organization and its benefits, please feel free to visit our [website](#) or call toll-free at 1-877-531-5512.

[Forward email](#)

This email was sent to larson.robert@epa.gov by info@algaebiomass.org
[Update Profile/Email Address](#) [Rapid removal with SafeUnsubscribe™](#) [Privacy Policy](#)

Algae Biomass Organization | PO Box 369 | 125 St. Paul Street | Preston | MN | 55965

To: Larson, Robert[larson.robert@epa.gov]
From: BIO - Biotechnology Industry Organization
Sent: Thur 12/18/2014 5:05:15 PM
Subject: BIO Newsletter: December 18, 2014

Add bio_newsletter@bio.org to your contacts to ensure email delivery. Not displaying correctly? [View this email in a browser](#). If you received this message from a friend, please subscribe to BIO Newsletter.

12.18.2014

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BIO PACIFIC RIM SUMMIT

2014 #BIOPacRim Wraps Up to be Another Successful Conference

BIO hosted over 300 attendees at this year's Summit along with media representation from the *Industrial Biotechnology Publication*, *Life Science Foundation Magazine*, *Fuels and Lubes* and *The Daily Transcript*. Additionally, for the first time BIO presented the 2014 BIO Rosalind Franklin Award for an outstanding woman in the industrial biotechnology sector who has made significant contributions to the advancement of the biobased economy and biotech innovation...

Share:

BIO INTERNATIONAL CONVENTION

With the Return of the BIO International Convention, Philadelphia Looks to Become an Innovation Hub

When the BIO International Convention was last in Philadelphia, the region admittedly learned a lot about the biotech industry. Perhaps most importantly, the economic benefits powerhouse regions outside of Philadelphia reap with a strong biotech presence...

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BIO CEO & INVESTOR CONFERENCE

More Than 150 Companies

HEALTH

Expected to Present at the 17th Annual BIO CEO & Investor Conference

The industry is currently experiencing
another banner year for biotech IPOs.
With 79 IPOs year to date, we are
nearly double where we were this time
last year. We are thrilled to be hosting
one-quarter of the 2014 IPO class as
presenting companies at the BIO CEO
& Investor Conference...

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

Wall Street Journal Highlights Promising Gene Therapy Advances

Bluebird bio reported some very uplifting news at the annual meeting of the American
Society of Hematology...

INTELLECTUAL PROPERTY

Patently Biotech's Top Articles of 2014




It's been a whirlwind year for IP. From international trade negotiations, to revised
PTO guidelines and dropping patent case stats, intellectual property is on the brain
and in the news...

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HEALTH

WSJ: The Measles Outbreak Coming Near You




Measles is making a terrifying comeback in the U.S., with some 600 cases reported
this year, more than in any year in the past two decades...

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FOOD LABELING

House Committee Examines GM Food Ingredients and FDA Regulation




It was a big day for agricultural biotechnology in our nation's capital. The House
Energy and Commerce Health Subcommittee held a hearing on the labeling of
genetically modified foods...

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FOOD AND AGRICULTURE

Scientists, Regulators Brief NRC Committee on GE Crops

The National Research Council's Genetically Engineered Crops Committee held its
second public meeting in Washington, DC, its latest round of scientific review for
biotech crops and genetically engineered foods...

Share:   

GMOS

How Cattle are Being Used in the Fight Against Ebola



When looking at cattle, you may have a tendency to think steak or hamburger. However, those in the field of animal biotechnology are working on products that will have you looking at cattle in a completely different way...

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INTELLECTUAL PROPERTY

Indian Patents Ensure Wide Access to Drugs, Without Raising Prices




Two recent studies have shown that patent protection does not dramatically increase prices, but does ensure widespread access to life saving therapeutics...

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INTELLECTUAL PROPERTY

Indian Patents Ensure Wide Access to Drugs, Without Raising Prices



Two recent studies on Indian drugs have shown that patent protection does not dramatically increase prices, but does ensure widespread access to life saving therapeutics...

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INTELLECTUAL PROPERTY

BIO Coalition Submits Patent Reform Letter to Congress




BIO, alongside a coalition of patent holders and inventors, submitted a letter to the chairmen and ranking members of the House and Senate Judiciary Committees...

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INTELLECTUAL PROPERTY

BIO Coalition Submits Patent Reform Letter to Congress



BIO, alongside a coalition of patent holders and inventors, submitted a letter to the chairmen and ranking members of the House and Senate Judiciary Committees...

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HEALTH

Mumps Outbreak in the NHL

MyFoxNY reports that a mumps outbreak is affecting several NHL teams, with at least 9 players infected since November, five of them with the Minnesota Wild...

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HEALTH

Mumps Outbreak in the NHL

MyFoxNY reports that a mumps outbreak is affecting several NHL teams, with at least 9 players infected since November, five of them with the Minnesota Wild...

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HEALTH

PBS Newshour: What You Need to Know about This Year's Elevated Flu Threat

PBS Newshour last week had a segment about this year's flu season, which doctors
are warning could be more severe than normal...
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Source: The New York Times


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RENEWABLE FUEL STANDARD

**EPA Must Improve Administration of the Renewable Fuel
Standard, Not Seek Legislative Change to It, BIO Says**

The Environmental Protection Agency's delays in administering the Renewable Fuel
Standard generate uncertainty for the advanced biofuel industry and undercut
investment.
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17th Annual Investor Highlights Current 2015 Market

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17th Annual Investor Highlights Current 2015 Market

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BIO: Securing Act Declared Ebola Vaccines

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BIO CEO & INVESTOR CONFERENCE

VACCINES

BIO: Secretary Burwell's PREP Act Declaration Will Advance Ebola Vaccine Development

BIO applaud Secretary Burwell's leadership and hope that other nations will follow in suit by putting in place liability protections that would encourage Ebola vaccine developers to continue moving forward as expeditiously as possible...

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BIO CEO & INVESTOR CONFERENCE



17th Annual BIO CEO & Investor Conference to Highlight Industry Financing, Current Policy Trends and the 2015 Market Outlook



BIO announces preliminary programming for the 17th Annual BIO CEO & Investor Conference to be held February 9-10, 2015 in New York City...

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COOPERATION WITH



02.09.15

BIO CEO & Investor Conference

The BIO CEO & Investor Conference is
the largest investor conference focused
on established and emerging publicly
traded and select private biotech
companies. Because our mission is to
support industry-wide success, we
present a broad and unbiased view of
investment opportunities...

REGISTER

03.24.15

BIO Asia International Conference

The BIO Asia International Conference,
co-hosted by the Biotechnology Industry
Organization (BIO), BioCentury
Publications and the Japan Bioindustry
Association (JBA), brings together the
global biotechnology and
pharmaceutical industry to explore
licensing and research collaborations in
the current Asia-Pacific business and
policy environments...

SAVE THE DATE

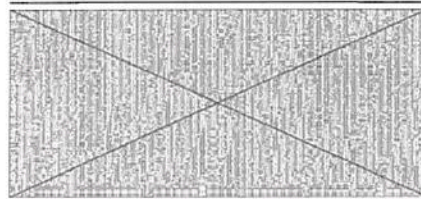
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2015 BIO International Convention

Biotech is more than just a job. It's a
mission to feed, fuel and heal the world.
And there's no better place to connect
with biopharma's top people and most
innovative technologies than at BIO.

2015. You'll experience powerful business partnering, benefit from **World Congress on Industrial Biotechnology** to network with 15,000 of the industry's best and brightest. See how the everyday becomes extraordinary at **Leaders of the Biobased Economy** will be in Montreal July 19-22, 2015 for the largest international industrial biotech event. BIO is seeking proposals for presentations on biofuels, renewable chemicals, biobased products and feedstocks until January 15...

SAVE THE DATE



Director/Senior Director US Market Access, Reimbursement, and Pricing, **Lexicon Pharmaceuticals**

Princeton, New Jersey, United States
December 10, 2014

Licensing Associate
Director, **Yale University**

New Haven, Connecticut, United States
November 19, 2014

Denmark is hiring Bio tech and pharmaceutical specialists, Talent Attraction **Denmark**

Non-US, Denmark
December 5, 2014

Instrumentation Specialist, **Harvard University**

Cambridge, Massachusetts, United States
December 11, 2014

Engineering Project Manager, **Regeneron**

Rensselaer, New York, United States

BEST BIOFEDINOLOGY JOB >



We were so inspired by Rosalind Franklin that we created an award in her honor to honor women leaders in industrial #biotech! #BIOPacRim
3 LIKES | [JOIN](#)



Injectable 3D vaccines could fight cancer and infectious diseases <http://ow.ly/FWb18>
6 RETWEETS | [JOIN](#)



Leaders of Sustainable Biofuels, an industry coalition to promote advanced biofuels, yesterday met stakeholders at the European Parliament in Brussels to urge for a tough EU-wide sub-target for adv...
4 LIKES | [JOIN](#)

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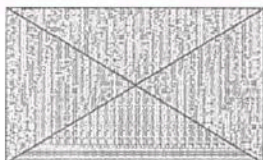
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This message was intended for: larson.robert@epa.gov

You were added to the system January 30, 2009. For more information
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To: Larson, Robert[larson.robert@epa.gov]
From: Algae Biomass Organization
Sent: Wed 12/17/2014 9:19:50 PM
Subject: Algae InSight: Be the Life of the Party with Algae!



Algae InSight

Edition: December 17, 2014

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Executive Director's Report

It's that time of year again where you find yourself at parties and gatherings of friends, family, co-workers and, well, total strangers. Looking for the perfect way to not only be the life of the party, but also help move the algae industry forward?

Here are a few key talking points that will enable you to dazzle the crowd.

These cups we're drinking from are recyclable. You know what else we should recycle? Carbon dioxide!

The CO₂ from power generation can be captured and used to grow algae that can be transformed into valuable fuels, foods and chemicals. This approach to combating climate change not only removes greenhouse gases from the atmosphere, it also displaces petroleum fuels. A barrel of algae oil is one more barrel of crude we can leave underground.

Don't forget to remind your audience that the value of algae-based food, fuel and feeds can also be *a source of revenue*, which is not at all the case for greenhouse gas disposal options such as sequestration.

Don't let the headlines fool you -- low oil prices won't hold back the algae industry.

First, few think that low oil prices will last for very long. In fact, now is the time to double down on biofuel technologies that can be the foundation of an energy supply that can insulate us from the volatility of crude prices.

Algae-based biofuels can be made here at home, can be grown on non-agricultural lands, and don't need freshwater supplies that are dwindling all over the world.

Besides, what's the result of more investment in oil drilling? We usually just get more access *to more expensive oil*. Thanks to biotechnology and American innovation, renewable fuel prices get *lower* every year.

Forget food vs. fuel – how about food AND fuel?

Technologies that use algae to make Omega-3 oils, astaxanthin, plastics and in water treatment services are proving their value as business models.

If anything, low gas prices could ignite consumer confidence and push up demand for sustainable products made from algae.

Perhaps the largest effect of non-fuel applications will be felt in the oceans. Algae fish feeds can reduce pressures on stocks needed to supply aquaculture operations that will become increasingly common as the world adapts to feed a growing population.

And for improved health algal Omega-3 oils are already on the market. This product is incredibly important, and deriving it from algae will save vital fisheries that are otherwise headed for depletion.

Big algae opportunity the Gulf & Southwest

As the cold sets in be sure to remind people that recent research from Pacific Northwest National Laboratory and Sapphire Energy has identified the most promising locations in America for commercial algae production, and the South is a big winner.

An analysis of climate, infrastructure availability of agriculture inputs found impressive potentials for cultivating algae along the Gulf of Mexico, especially on the Florida peninsula.

While algae can be commercially grown nationwide (check out the great success of BioProcess Algae), the research indicated that the southern coast of Texas, Louisiana and southern Arkansas are particularly attractive.

Turns out spring break students aren't the only ones who love the sunshine.



And if you really want to impress your guests, mix up some algae cocktails. You can make a blue-green drink ([recipe here](#)) or one with actual algae ([recipe here](#)).

So make your final toast to a future where algae plays a role in smarter energy security, a stronger economy and a sustainable planet.

Happy Holidays!

Matt Carr

Executive Director

Algae Biomass Organization

ABO's Final Comments to the EPA

[ABO submitted final comments](#) to the Environmental Protection Agency, requesting that the final Clean Power Plan rules explicitly state that carbon capture and utilization technology to recycle carbon dioxide into useful products is an acceptable strategy for states to meet their emissions targets.

Thanks to all of you that submitted your own comments! The EPA notices when large numbers support a particular initiative, and we are grateful for algae industry supporters everywhere.

To keep the pressure on ABO has met with a number of Congressional offices, Agency staff and Administration officials to make the case for algae's potential to not only reduce our greenhouse gas emissions, but also become an invaluable new source of products and services we need for modern life.

Keep your eyes open for more opportunities to support carbon recycling!

ABO and EAGA Agree to Share Member Benefits

The US-based Algae Biomass Organization and the [European Algae Biomass Association](#) have agreed to a partnership that extends the member benefits of each organization.

The two organizations have also agreed to collaborate to further the development of algae biomass technologies in the U.S., Europe and globally through events, conferences and policy advocacy.

Algae Industry Tackling Global Malnutrition

EABA Conference 2014

Antenna India

Antenna Spirulina

The Guardian two organizations are featured
spirulina

Legislative Update

[here](#)

[Read ABO's press announcement here.](#)

[Read ABO's full comments here.](#)

[Check out the statement from ABO](#)

EPA Calls for Nominations for 20th Annual Presidential Green Chemistry Challenge Award

<http://www2.epa.gov/green-chemistry>

Member News

[OriginOil CEO sees protein business model for algae emerging out of rising fishmeal prices](#)

[Biomass Producers Today, Carbon Kings Tomorrow](#)

[Time for Teddy Talk](#)

[Deal-Fueled Omega-3 Makers Plan U.S. Ad Campaign to Revive Sales](#)

[LANL introduced speedy DNA identifier](#)

Industry News

[Governor Bentley to visit Algae Systems, Inc.](#)

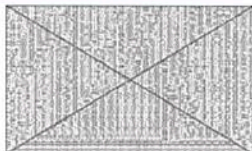
[Researchers to use algae to clean up mine water](#)

[Why Farmed Salmon is Losing its Omega-3 Edge](#)

[Drinking beer for algae](#)

[CleanTech Shines Differently Around California](#)


Join ABO



As we continue to promote the development of commercial markets for sustainable products derived from algae, we invite you to join us in our efforts by becoming a member of the Algae Biomass Organization. As the trade association for the industry, we act as a voice for the industry to the public, media and policy makers while also representing individuals and companies across the value chain. As an ABO member, you'll have access to a wide range of services and information, including:

- Representation in ABO's policy initiatives with policy makers in Congress and at key federal agencies, including the USDA, EPA and DOE;
- Regular industry updates and issue alerts via member-only communications;
- Opportunity to participate in ABO committees;
- Results from our annual industry survey;
- Access and input to the ABO's Technical Standards documents;
- Participation in members-only events, webinars, briefings and networking opportunities;
- Discounted registration for ABO-hosted industry events.

For questions about membership in the Algae Biomass Organization and its benefits, please feel free to visit our [website](#) or call toll-free at 1-877-531-5512.



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To: Larson, Robert[larson.robert@epa.gov]
From: BIO - Biotechnology Industry Organization
Sent: Thur 12/4/2014 5:48:21 PM
Subject: BIO Newsletter: December 4, 2014

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12.04.2014




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BIO CEO & INVESTOR CONFERENCE

Voting Now Open for the Buzz of BIO at the 2015 BIO CEO & Investor Conference

[The Buzz of BIO contest at the 2015 BIO CEO & Investor Conference recognizes highly innovative companies in the biotech sector and helps position these companies to develop strategic partnerships within the industry...](#)

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HEALTH

An Easy Money Saver: the Flu Shot




The Wall Street Journal's Avery Johnson wrote about a potential money saving (and health-protecting) step that's easy to take this holiday season: getting a flu shot...

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EMERGING COMPANIES

Exclusive FDA Survey Webinar

[BIO is conducting an exciting new survey designed to measure FDA/Sponsor Interactions During Drug Development. We are excited to announce an exclusive webinar for survey participants only to reveal the preliminary results of the study...](#)

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VACCINES

New Survey: Most Women Believe They Are Not up-to-Date on Vaccinations

A new national survey from Rite Aid and National Foundation for Infectious Diseases shows that the majority of adult women living in the United States do not believe they are up to date on vaccinations...

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Jim Greenwood Op-Ed: Time to Fund Medical Countermeasures against Threats like Ebola

The Hill published an op-ed from BIO President and CEO Jim Greenwood calling on Congressional appropriators to fully fund federal biodefense programs...

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HEALTH

#GivingTuesday: What Group Will You Be Supporting?

#GivingTuesday is the global day dedicated to giving back. According to the founding group, in three short years #GivingTuesday has become an annual celebration of giving that unites 10,000+ organizations worldwide...

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HEALTH

Raising Awareness of Type 1 Diabetes

November was Diabetes Awareness Month. So many people have heard of diabetes, but yet so few really understand the disease...

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INTELLECTUAL PROPERTY

New Report Emphasizes the Role of Patent Protection in the Global Diffusion of New Drugs

A new report from the National Bureau of Economic Research has determined that strong patent protection accelerates the speed at which new drugs are launched in different countries...

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AGRICULTURAL BIOTECHNOLOGY

Chestnut Lovers – Remember Biotech Over Holidays!

In the early 1900s, the eastern United States chestnut tree population was hit with a pathogenic fungus called Cryphonectria parasitica...

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GMOS

Judge Blocks Maui County from Implementing GMO Ban

The media is reporting on a decision by a federal judge to postpone implementation of a new law in Maui County banning the cultivation of genetically modified organisms until he considers arguments in a lawsuit against the measure...

BY JEFF CHAPMAN

GMOs

What Does it Really Mean to be Pro-GMO?



It has been said that if you are Pro-GMO, or for Genetically Modified Organisms, then you must oppose the the Anti-GMO movement...

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FOOD AND AGRICULTURE

For the Holidays: Change Your Beliefs Around GMOs

Genetically modified crops have increased farm income, reduced pesticide use, soil erosion and carbon dioxide emission, and benefited consumers by decreasing fungal toxin contamination of corn...

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FOOD AND AGRICULTURE

For the Holidays: Change Your Beliefs Around GMOs



Genetically modified crops have increased farm income, reduced pesticide use, soil erosion and carbon dioxide emission, and benefited consumers by decreasing fungal toxin contamination of corn...

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World AIDS Day: Act Aware




World AIDS Day is an opportunity for people worldwide to unite in the fight against HIV, show their support for people living with HIV and commemorate people who have died...

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HIV/AIDS

World AIDS Day: Act Aware



World AIDS Day is an opportunity for people worldwide to unite in the fight against HIV, show their support for people living with HIV and commemorate people who have died...

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INTELLECTUAL PROPERTY

Patent Trolls: A Scam on the American People

According to the U.S. Patent and Trademark Office, the number of patent trolls has increased significantly in recent years. The Commission on the Future of Intellectual Property and Innovation has called for a comprehensive reform of the patent system to address this issue.




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WORLDWIDE STRATEGIES

Patent Trolls and Nigerian Scammers

According to the Federal Trade Commission, the most notorious patent assertion entity (otherwise known as a patent troll) has agreed to a consent decree...

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GMO ANSWERS


RTP, North Carolina Welcomes GMO Answers

GMO Answers recently hosted its first Open Doors Tour where we invited local bloggers to visit three members of the Council for Biotechnology Information — Syngenta, BASF Plant Science and Bayer CropScience...

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Galvanizing Brains to Launch Neuroscience Startups

We are looking for a few great brains to participate in the Neuro Startup Challenge.
and we want you...
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BIO and Affiliates Highlight the Growing Biorenewables Sector in California

In 2013, California's life science industry created almost \$259 billion in economic
activity for the state. The biorenewables sector was instrumental in generating this
growth, creating high-paying jobs and attractive economic opportunities for
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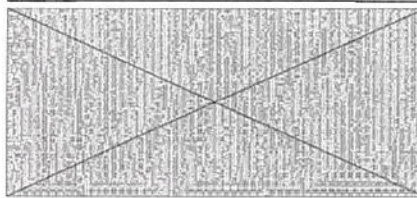
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Development, Tulane School
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Technology Licensing
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GMO Banana Makes Time's "25 Best
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can find new levels of confidence and joy...
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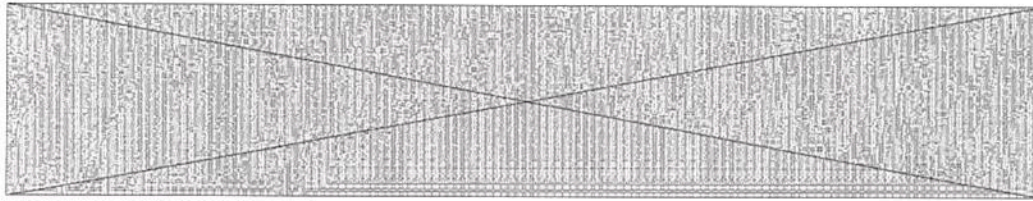
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From: National Biodiesel Board
Sent: Thur 12/4/2014 7:59:47 PM
Subject: Biodiesel is Bigger in Texas

|

To: Larson, Robert[larson.robert@epa.gov]
From: Dawn Moore
Sent: Fri 11/21/2014 4:21:29 PM
Subject: RFS Announcement: A Cloud of Uncertainty with a Silver Lining



FOR IMMEDIATE RELEASE
November 21, 2014

RFS Announcement: A Cloud of Uncertainty with a Silver Lining

WASHINGTON — The U.S. Environmental Protection Agency (EPA) today announced it is delaying finalization of the 2014 Renewable Fuel Standard (RFS) Renewable Volume Obligations (RVO) until 2015. Bob Dinneen, president and CEO of the Renewable Fuels Association, released the following statement:

"Deciding not to decide is not a decision. Unfortunately, the announcement today perpetuates the uncertainty that has plagued the continued evolution of biofuels production and marketing for a year. Nevertheless, the Administration has taken a major step by walking away from a proposed rule that was wrong on the law, wrong on the market impacts, wrong for innovation, and wrong for consumers.

"Moreover, it is clear that one of the reasons we find ourselves in this position is that the oil industry has steadfastly refused to make the investments in infrastructure or allow their marketers to offer higher ethanol blends like E85 or E15. In the absence of their dogged efforts to undermine the RFS, this would be far simpler for EPA.

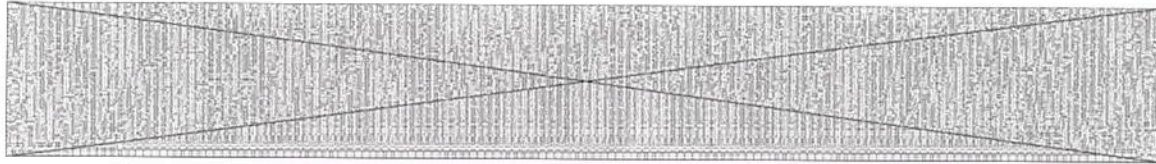
"The monopoly-protecting talking points of the oil industry notwithstanding, the RFS has been enormously successful. It has compelled competition in motor fuel markets, lowered consumer gasoline costs, and reduced the carbon footprint of transportation fuels. We look forward to working with the Administration to assure this critically important program is implemented consistent with congressional intent, to the benefit of consumers and with the goal of advancing the evolution of biofuels production and marketing.

"Refiners will continue to resist the competition from biofuels. The RFS must be allowed to be the market forcing mechanism it was designed to be. In the end, the verdict on today's announcement can only be made after a decision on a path forward for biofuels is identified."

About the Renewable Fuels Association

The Renewable Fuels Association is the leading trade association for America's ethanol industry. Its mission is to advance the development, production, and use of ethanol fuel by strengthening America's ethanol industry and raising awareness about the benefits of renewable fuels. RFA's members are working to help America become cleaner, safer, more energy independent and economically secure. For more information, visit EthanolRFA.org

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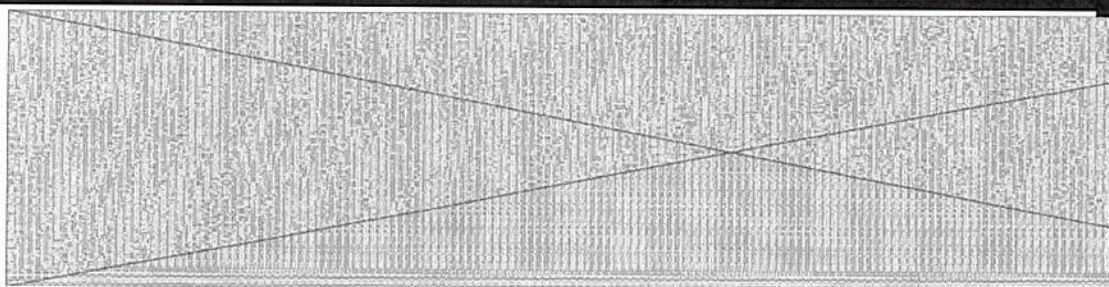
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Dawn Moore
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Renewable Fuels Association
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dmoore@ethanolrfa.org

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To: Larson, Robert[larson.robert@epa.gov]
From: BIO Industrial & Environmental News
Sent: Thur 11/20/2014 1:17:07 PM
Subject: Industrial Biotech News Clips from November 2014



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Biofuels

Biofuels Digest (November 11, 2014) [Bioeconomy Policy for 2015: US Elections, What Happened, What Now](#)

To open ABLC Next, what we like to call the "heads of the 7 families" — or in this case, the heads of seven key trade associations for the advanced bioeconomy, joined us on stage as we looked at the impact of the recent US midterm elections — and the policy outlook in 2015 and beyond. Brent Erickson, Executive Vice President, BIO; head, Industrial & Environmental Section comments on the RFS, why BIO? And the overall message.

Biofuels International (November 13, 2014) [Norwegian Conducts First Biofuel Flight](#)
Scandinavian airline Norwegian has operated its initial biofuel-powered flight. On Tuesday 11 November, the aircraft flew from Bergen to Oslo with close to 50% biofuel. The airline hopes to contribute towards making aviation carbon neutral by 2050 through developing new technologies and frameworks.

Bloomberg (November 12, 2014) [Fossil Fuels with \\$550 Billion Subsidies Hurt Renewables](#)
Fossil fuels are reaping \$550 billion a year in subsidies and holding back investment in cleaner forms of energy, the International Energy Agency said. Oil, coal and gas received more than four times the \$120 billion paid out in incentives for renewables including wind, solar and biofuels, the Paris-based institution said today in its annual World Energy Outlook.

Business Standard (November 12, 2014) [Indo-US Joint Effort to Derive Non-Food Biofuels from 2017](#)

In a significant step towards generating biofuels from non-food plant sources, the US-India joint consortium for the development of sustainable advanced lignocellulosic biofuel systems will spearhead research in the production of commercially viable biofuels—ethanol and butanol. The initiative would work to deliver a model for production using crops like energy sorghum, bamboo, pearl millet and switch grass.

Greenwire (November 12, 2014) [Govs. Brown, Inslee Warn Administration about Scaling Back RFS](#)

The Democratic governors of Washington and California are warning that a rollback of federal

biofuel mandates could thwart state efforts to support low-carbon advanced biofuels. In a letter to Obama administration officials, Govs. Jay Inslee of Washington and Jerry Brown of California said that scaling back the federal renewable fuel standard this year, as U.S. EPA is considering, would create an uncertain policy atmosphere that could hurt their states' renewable fuel initiatives.

New York Times (November 11, 2014) U.S. and China Reach Climate Accord After Months of Talks

China and the United States made common cause on Wednesday against the threat of climate change, staking out an ambitious joint plan to curb carbon emissions as a way to spur nations around the world to make their own cuts in greenhouse gases...A climate deal between China and the United States, the world's No. 1 and No. 2 carbon polluters, is viewed as essential to concluding a new global accord. Unless Beijing and Washington can resolve their differences, climate experts say, few other countries will agree to mandatory cuts in emissions, and any meaningful worldwide pact will be likely to founder...As part of the agreement, Mr. Obama announced that the United States would emit 26 percent to 28 percent less carbon in 2025 than it did in 2005. That is double the pace of reduction it targeted for the period from 2005 to 2020.

Springfield News-leader (November 11, 2014) Missouri Governor to Help Lead Biofuels Groups

Missouri Gov. Jay Nixon is in line to serve as a leader of the Governors' Biofuels Coalition. Nixon's office said Monday that he will become vice chairman of the organization in 2015 and then could become chairman in 2016 when Iowa Gov. Terry Branstad's term ends.

The Washington Post (November 11, 2014) The 'Termites of the Sea' have Super Weird Digestive Systems, and they Might Help us Make Biofuels

Shipworms were already weird animals, but they just got weirder. The ocean-dwelling clams, which actually look much more like slimy worms, are some of the only creatures in the world that can eat wood. Now scientists have figured out that shipworms are even more unique than we thought: Instead of breaking down their food using bacteria in their guts (the way basically almost all animals do), shipworms break down wood using bacteria in their gills. This revelation was published Monday in the Proceedings of the National Academy of Sciences, with research lead by Daniel Distel, director of the Ocean Genome Legacy Center of New England Biolabs at Northeastern University. Distel, along with researchers from the U.S. Energy Department's Joint Genome Institute, is interested in harnessing the shipworm's unique ability to digest wood to improve the production of renewable, environmentally friendly fuels.

Politico (November 18, 2014) Conaway: Ready to work on next farm bill, immigration

"It's never too early to start on the next farm bill," said Rep. Mike Conaway, the next chairman of the House Agriculture Committee. The Texas Republican, whose position in the top agriculture post was confirmed Tuesday by the House Republican Steering Committee, told POLITICO in an exclusive interview Friday that he's already thinking about the 2019 farm bill, planning an in-depth review of the food stamp program and considering an agriculture-only immigration reform bill.

Biobased Products, Renewable Specialty Chemicals, and Synthetic Biology

Biofuels Digest (November 10, 2014) Dr. Debbie Yaver of Novozymes Named Winner of BIO'S First Rosalind Award

In Washington, BIO has announced Dr. Debbie Yaver, Director of Expression Technology, Genomics, and Bioinformatics at Novozymes, as the recipient of the first annual Rosalind Franklin Award for leadership in industrial biotechnology. The Rosalind Franklin Award is a newly established annual award to honor an outstanding woman in the field of industrial biotechnology and bioprocessing.

Biofuels Digest (November 12, 2014) Algae Biomass Organization Expands Carbon Utilization Campaign

In Washington, the ABO unveiled a new website, www.recyclecarbon.org, as part of its ongoing campaign to persuade the EPA to explicitly recognize Carbon Capture and Utilization technologies as approved emissions reduction strategies under its new power plant regulations. ABO believes such recognition would encourage the development of innovative technologies that can use greenhouse gases to make valuable products while simultaneously reducing emissions.

EPA News (November 13, 2014) EPA Calls for Nominations for 20th Annual Presidential Green Chemistry Challenge Award

The U.S. Environmental Protection Agency (EPA) today announced its call for nominations for the 2015 Presidential Green Chemistry Challenge Awards for companies or institutions that have developed a new process or product that helps protect public health and the environment. "The Presidential Green Chemistry Challenge is an opportunity for EPA to recognize green solutions and help solve critical environmental problems," said Jim Jones, EPA's Assistant Administrator for Chemical Safety and Pollution Prevention. "Green chemistry is about designing products and processes that reduce energy, chemicals and water waste while cutting manufacturing costs, and sparking investments. Ultimately, these chemicals and products are safer for people's health and the environment. This year, EPA is excited to be celebrating the 20th anniversary of the awards."

ICIS (November 12, 2014) Asia's Biopolymers Capacity to Surge in 2010-15

Asia's biopolymers production capacity is expected to more than double to around 480,000 tonnes/year in 2015 from around 190,000 tonnes/year in 2010 on growing demand for biodegradable plastic bags and the sustainability drive in the plastics industry, an industry executive said on Wednesday. The trend towards sustainable, "landfill friendly" plastic bags has made degradable bioplastics a popular alternative to traditional polyolefin-based polymers that are often viewed as environmentally hazardous, Alan Yeap, the CEO of New Quantum, told ICIS on the sidelines of the 2nd ICIS Asian Polyolefins conference in Singapore. Global biopolymers output is expected to grow to 1.71m tonnes/year in 2015 from 725,000 tonnes/year in 2010, he said.

Plastics Today (November 7, 2014) Perstorp Boosts Activities in Bioplastics

Perstorp, a specialty chemical company headquartered in Malmö, Sweden and the world leader in the manufacture of ϵ -polycaprolactones (PCL) - marketed under the Capa brand, is increasing its activities in bioplastics. Polycaprolactone (PCL) is a biodegradable plastic produced on the basis of petroleum. Highly miscible, it blends easily with other plastics, melts easily and is non-toxic. Biopolymers with Capa added are "a winning formula," says the company, due to its good mechanical properties, biodegradability and compatibility across a wide range of polymers. Importantly, Capa improves the functional properties, especially toughness and flexibility, of bioplastics such as PLA, PHA and starch, enabling these to be competitive in film and packaging applications. Its compostability offers end-of-life advantages in packaging, bags and film applications.

Science (November 13, 2014) DNA Tape Recorder Stores a Cell's Memories

If cells could talk, they'd have quite a story to tell: Their life history would include what molecules they'd seen passing by, which signals they'd sent to neighbors, and how they'd grown and changed. Researchers haven't quite given cells a voice, but they have now furnished them with a memory of sorts—one that's designed to record bits of their life history over the span of several weeks. The new method uses strands of DNA to store the data in a way that scientists can then read. Eventually, it could turn cells into environmental sensors, enabling them to report on their exposure to particular chemicals, among other applications. "They've done a really exceptional job turning DNA into readable, writable memory inside living cells," says Ahmad Khalil, a biomedical engineer at Boston University who was not involved in the new work. "I think it's a very cool new direction for synthetic biology to take."

The Times of India (November 9, 2014) Scientists Come Together to Use Renewable Energy in Villages

Eleven scientists from across the country are back in school in Coimbatore — this time to brainstorm, collaborate and come up with ideas to use renewable energy to mitigate climate change. One of the villages that will serve as a model is Thalini, near Tirupur, where electricity is being generated using biomass. "Four years ago, Tamil Nadu Agricultural University (TNAU) set up a 100 cubic metre biomass plant to generate electricity for 120 houses and 28 streetlights in association with a non-governmental organisation, Non-Conventional Energy and Rural Development Society," said S Kamaraj, professor and head, department of bio-energy. The village generates 12 units of power every hour using the biomass plant, maintained by SAG Federation and women self-help groups... Another participant is looking forward to learning the latest technology and replicating it in tribal villages in Vellore district. "We are working on a project on using waste land and waste water to create an algae and extract biofuel. This winter school will definitely give us more insight to our project," said S Joshua Davidson, assistant professor, KVK, Vrinjipuram, Vellore.

The Western Producer (November 13, 2014) Canola Bioplastic Trashes Trash

Paul Pereira, chief executive officer of Meredian Holdings Group, explains to potential clients how canola oil can be turned into a bioplastic. Meredian has built a bio-plastics processing plant in Bainbridge, Ga., using a process initially developed by Proctor & Gamble. Meredian scientists have refined the technology and can now manufacture a plastic polymer called polyhydroxyalkanoate (PHA) from canola oil.

Industrial and Environmental Section Member News

The Auto Channel (November 11, 2014) First Ever Biosynthetic Motor Oil to Receive Highest Industry Performance Certification; Demonstrates Improved Fuel Economy

Biosynthetic Technologies, a leading manufacturer of renewable high-performance lubricant base oil, announced today that it has received ILSAC GF-5 certification on both SAE 5W-20 and 5W-30 grade passenger car motor oil (PCMO) formulations using its Biosynthetic Base Oil. ILSAC GF-5 represents the latest performance standard set by the International Lubricant Standardization and Approval Committee (ILSAC). These formulations have also been certified by the American Petroleum Institute (API) to exceed requirements of the most recent service category issued by API's Lubricants Group – the API SN "Resourcing Conserving" designation.

Biofuels Digest (November 10, 2014) Genomatica, Solazyme, Amyris, BASF Take Top

Slips in the 30 Hottest Companies in Biobased Chemicals and Materials for 2014-15

Renewable chemicals developer Genomatica took the #1 spot in the 2014-15 "30 Hottest Companies in Biobased Chemicals and Materials" rankings, published today in The Digest, the world's most widely-read advanced bioeconomy daily. It is Genomatica's fourth consecutive year at the top of the rankings. Solazyme (#2), Amyris (#3), BASF (#4), LanzaTech (#5), DSM (#6), Elevance Renewable Sciences (#7), DuPont Industrial Biosciences (#8), and BioAmber and Virent (#10) rounded out the top 10. The rankings, which recognize innovation and achievement in biobased chemicals and materials development, are based 50 percent on votes from an invited panel of distinguished international selectors, and 50 percent on votes from subscribers of The Digest.

Chemical Engineering (November 5, 2014) Solazyme and Versalis to Collaborate on Commercialization of Biodegradable Lubricant

Solazyme, Inc. and Versalis, the chemical subsidiary of Eni s.p.A. have announced a partnership to expand the commercial use of Encapso, what is said to be the world's first commercially-available, biodegradable encapsulated lubricant for drilling fluids...Solazyme launched Encapso in the Spring of 2014. With its unique, on-demand lubricant delivery system, Encapso increases rates of penetration, decreases drag and reduces both rotational torque and friction in a variety of vertical and horizontal drilling applications. This can lead to reduced drilling costs and accelerated operations. Developed from Solazyme's technology platform, Encapso is non-hazardous and biodegradable.

Digital Journal (November 11, 2014) Green Biologics is Named # 6 in the 40 Hottest Smaller Companies in the Advanced Bio-Economy by Biofuels Digest

Green Biologics Ltd. (GBL), a UK based industrial biotechnology and renewable chemicals company, was named on November 10, 2014 to the 40 Hottest Smaller Companies in the Advanced Bio-Economy list (#6) and to the 30 Hottest Companies in Bio-based Chemicals and Materials (#28). The Rankings are compiled by Biofuels Digest, and were awarded at a gala reception held at the Fairmont San Francisco, CA. This marks the first time GBL was named to either the Hot 30 or the Hot 40 list.

Forbes (November 11, 2014) Can Biofuels Make a Comeback?

Rand and others will certainly acknowledge that it is a challenging market, and oil hovering around \$80 a barrel makes investors skittish. But give biofuel execs credit: they learn from the past. Much of the activity centers around developing fuels and chemicals out of waste products and virtually everyone is adopting strategies to minimize the capital requirements to get their technology to market. Many say they will deliver modular processing units to market that will allow for distributed production. Many are also probably also better categorized as alt feedstock fuels rather than biofuels because they rely on methane or CO2 from any source...Kiverdi and LanzaTech, meanwhile, say they have created microbes convert carbon dioxide into fuels and other marketable materials. The companies use the same low cost feedstock as Liquid Light, but they harness metabolic processes.

MarketWatch (November 13, 2014) Gevo Names Among the Fastest Growing Companies in North America on Deloitte's 2014 Technology Fast 500™

Gevo, Inc. a leader in renewable chemicals and advanced biofuels and the world's only commercial producer of renewable isobutanol, announced today it was named on Deloitte's Technology Fast 500™, a ranking of the 500 fastest growing technology, media, telecommunications, life sciences and clean technology companies in North America. Gevo grew 1,146 percent during this period and was ranked 103rd overall but, notably, in the industry where it competes, Gevo ranked third out of all clean technology companies.

Marketwatch (November 18, 2014) Abengoa to Develop in Belgium the Largest Biomass Power plant in the World

Abengoa, the international company that applies innovative technology solutions for sustainability in the energy and environment sectors, has been selected by the electricity and gas company, Belgian Eco Energy (Bee), to develop the largest commercial plant in the world of new construction in Ghent (Belgium), which will produce 215 MW of electricity, being one hundred percent of the raw material biomass (wood chips and agro-residues). The amount of the project will exceed 315 million euro. Abengoa will be responsible for the engineering, design and construction of the plant. The project is expected to create up to 1,100 jobs during the execution phase.

The Motley Fool (November 9, 2014) 2 Airlines Are Already Using Biofuels, So Why Aren't We All Flying Green

In July, Brazilian airline GOL became the first airline to use a new type of biofuel to power a commercial flight. The fuel in question was farnesene, which is made from sugar cane. And like the ethanol in your gasoline, 10% of the Florida to São Paulo flight's jet fuel was made of this biofuel. But this isn't the only biofuel you could see taking flight in the future. While Brazilian discounter GOL may not be the first name that comes to your mind for air travel, it isn't the only one testing farnesene. For example, Lufthansa has been using the fuel, too, just not on commercial flights. That small and large airlines are looking at farnesene, however, is big news for Amyris... Solazyme uses algae to produce biofuels and other oils, like those used in food. It is testing its fuels with the U.S. Department of Defense and the U.S. Navy.

Virtual Press Office (November 12, 2014) New U.S. Patent Issued to Dyadic International

Dyadic International, Inc., a global biotechnology company whose patented and proprietary technologies are used to develop, manufacture and sell enzymes and other proteins for the bioenergy, bio-based chemical, biopharmaceutical and industrial enzyme industries, announced today that it has been issued U.S. Patent No. 8,871,493 "Transformation system in the field of filamentous fungal hosts" by the United States Patent and Trademark Office (USPTO). This issued patent provides broad and extensive intellectual property rights related to Dyadic's C1 Expression System, which is based on the filamentous fungus *Myceliophthora thermophila*. The issued claims cover, engineering C1 cell lines, the molecular tools used to engineer these C1 cell lines, as well as genes over expressed in C1 originating from *Myceliophthora thermophila*, and other organisms.

Reuters (November 18, 2014) Evolva Holding to Acquire Allylix

Evolva, the Swiss synthetic biology company developing stevia, vanillin, and other ingredients via microbial fermentation - is to acquire San Diego-based Allylix, a privately held yeast fermentation company with a focus on high-value ingredients, in an all-stock transaction. The acquisition will immediately expand Evolva's product and IP portfolio and enhance the competitiveness of Evolva's stevia products.

Industry Events Calendar

Carbon Dioxide as Feedstock for Chemistry and Polymers- December 2-3, 2014- Essen, Germany

As the largest event on Carbon Capture and Utilization (CCU) in 2014, more than 300 participants from the leading industrial and academic players in CO2 utilization that are expected to attend the conference and to share their recent success stories, as well as new ideas and products in implementation. co2-chemistry.eu

BIO Pacific Rim Summit on Industrial Biotechnology and Bioenergy- December 7-9, 2014- San Diego, California

The 9th Annual BIO Pacific Rim Summit is the original conference dedicated solely to the growth of the industrial biotechnology and bioenergy sectors in North America and the Asia-Pacific region. **Registration and housing**

ARPA-E Energy Innovation Summit- February 9-11, 2015- Washington, DC

The ARPA-E Energy Innovation Summit brings together the very best minds in business, academia, and government to advance cutting-edge technologies that could fundamentally change the way we generate, use and store energy. arpa-e-summit.com

Advanced Biofuels Leadership Summit- March 11-13, 2014- Washington, DC

ABLC has become of the the largest gatherings of Advanced Biofuels and Renewable Chemicals operating company CEOs and senior executives, strategic partners, financiers, equity analysts, policy makers and industry suppliers.

International Conference on Bio-based Materials- April 8-10, 2014- Cologne

This conference aims to provide major players from the European and Asian bio-based chemicals, plastics and composite industries with and opportunity to present and discuss their latest developments and strategies. biowerkstoff-kongress.de

BIO World Congress on Industrial Biotechnology- July 19-22, 2015- Montreal, Canada

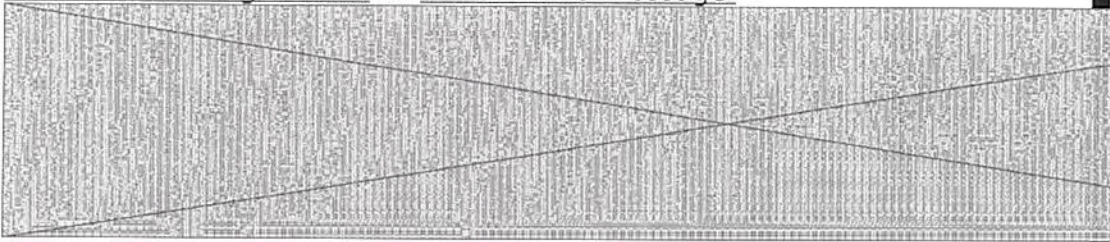
The BIO World Congress on Industrial Biotechnology is the world's largest industrial biotechnology event for business leaders, investors, and policy makers in biofuels, biobased products, and renewable chemicals. **The call for papers is now open until January 15- submit your abstract now!** bio.org/worldcongress

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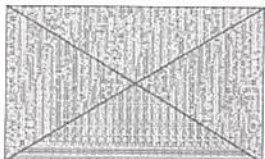


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To: Larson, Robert[larson.robert@epa.gov]
From: Algae Biomass Organization
Sent: Wed 11/19/2014 8:32:37 PM
Subject: Algae InSight: DOE Made How Much On Its Investments In Clean Energy?



Algae InSight

Edition: November 19, 2014

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[In Memoriam: Mary Rosenthal](#)

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Executive Director's Report

The Department of Energy's Loan Programs Office excited many of its supporters and stunned many of its detractors this month with a report that the agency's program to finance new energy technologies is expected to take in some \$5 billion in interest payments-far exceeding many expectations and throwing cold water on claims that the program was a failure. The financial solvency of this program is good news for those properly concerned about oversight, but take a look at the more tangible accomplishments of the projects DOE supported:

- 56,000 jobs created or saved
- 14 million metric tons of CO2 emissions prevented
- Energy for more than 1 million homes generated
- 900 million gallons of gasoline saved
- Pollution reductions equivalent to taking 3 million cars off the road

Remarkably, these are the benefits of *just one clean energy research and development program*.

Imagine the gains to our economy, or environment and our energy security when these technologies are fully deployed.

There are several opportunities to keep this momentum, not only for algae but an entire range of innovative technologies.

First, Congress will soon be voting on several tax credits that apply to advanced biofuels. These credits help advance the commercialization of new biofuel technologies as producers ramp up production, and give investors the confidence of a level playing field with other fuels.

Second, the Environmental Protection Agency is considering final rules for its Clean Power Plan. Explicitly recognizing Carbon Capture and Utilization (CCU) technologies as approved emissions reduction strategies would create a surge in confidence among investors and utility regulators interested in using CO2 to grow algae. This confidence would accelerate the development and deployment of algae cultivation technologies and projects that can reduce greenhouse gas emissions and become a source of renewable commodity chemicals, fuels, food, and feed, as well as high-value products such as nutraceuticals, pharmaceuticals, cosmetics and more.

Both of these potential policy avenues could have impacts many times that of the successful DOE loan programs.

To help make these impacts real we need algae supporters to communicate with policy makers more often. Make phone calls. Visit Congressional offices. Write letters.

As someone who regularly meets with members of Congress and agency staff I can assure you that such letters are not only read, but that they are actively sought by those that want to support algae research and development.

And you can bet that opponents of our industry are mobilizing their own letter writing campaign.

ABO has set up a [new tool that makes submitting your own comments to the EPA easy](#). Take one minute and add your voice. While you are at it, you can also look up your own elected officials' contact info.

Imagine power plants that operate next to algae farms, recycling CO2 that would otherwise go into our atmosphere into dozens of different products. We'd be able to free up agricultural lands, relieve pressure on freshwater supplies, and reduce greenhouse gas emissions.

Your voice may seem like one in millions, but this issue is getting some special attention and every person that voices support for carbon utilization is getting noticed in Washington, DC.

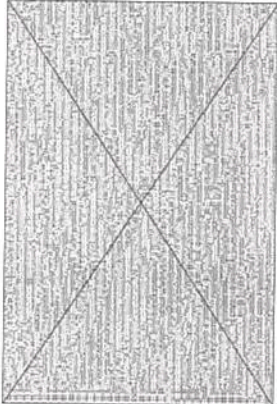
So please take a minute and add yours to the growing voice of Algae Nation.

Sincerely,

Matt Carr

Executive Director

In Memoriam: Mary Rosenthal, ABO's First Executive Director



November 1st, 2014 was a sad day for the algae industry with the passing of Mary Rosenthal, ABO's first executive director, after a battle with cancer.

Mary took the reins at ABO during a time - 2009 - when she wasn't sure if there would even be enough funding for long term employment. Back then, algae was just coming on to the national radar, and ABO had been formed to bring this fledgling industry together.

No stranger to evangelizing sustainable products and materials from her time at NatureWorks, Mary rolled up her sleeve and was instrumental in developing new members, transforming the annual Algae Biomass Summit into the premier industry conference, and becoming the voice of the algae industry.

During her tenure the organization grew to more than 200 members representing a wide cross section of industry. Under Mary's leadership the ABO also achieved success on numerous policy initiatives on the Hill, including getting algae biofuels to qualify for the \$1.01 tax credit for the first time ever.

Mary was an inspiration to many as she continued to fight for algae even while fighting cancer. She will be missed.

Biofuels Digest recalled Mary's contributions to the industry and the loss felt by those that had the privilege of working with her. And Tim Portz at Biomass Magazine writes a moving tribute to Mary in an article that has also attracted comments from many that have worked with her over the years.

For donations and memorials, please send them in honor of Mary to the Minnesota Ovarian Cancer Alliance (MOCA). Their address is 4604 Chicago Ave S, Minneapolis, MN 55407 and their phone number is 612-822-0500. You are welcome to instead send these donations and memorials to your local Ovarian Cancer Society.

Send the FDA Your Own Comments

To: Larson, Robert[larson.robert@epa.gov]
From: BIO - Biotechnology Industry Organization
Sent: Thur 11/13/2014 6:03:53 PM
Subject: BIO Newsletter: November 13, 2014

Add bio_newsletter@bio.org to your contacts to ensure email delivery. Not displaying correctly? [View this email in a browser](#). If you received this message from a friend, please subscribe to BIO Newsletter.

11.13.2014

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FOOD LABELING

Labeling Initiatives Fall in 2014 Elections

Colorado and Oregon voters have rejected Proposition 105 and Measure 92, the food labeling initiatives on the November 4th ballot. Like previous ballot initiatives in California in 2012 and Washington State in 2013, the Colorado and Oregon proposals would have required the mandatory labeling of foods containing biotech ingredients.

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EMERGING COMPANIES

Small Business Innovators Talk about Their Emerging Biotech

World-class tradeshows such as the BIO Convention are showing a renewed focus on spotlighting emerging research and development from tech pioneers...

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PACIFIC RIM SUMMIT

CA Scientist Receives First BIO Rosalind Franklin Award

BIO has announced Dr. Debbie Yaver as the recipient of the first annual Rosalind Franklin Award for leadership in industrial biotechnology.

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CEO & INVESTOR CONFERENCE

2015 BIO CEO & Investor Conference™ to Feature Dynamic List of Company Presentations

The Buzz of BIO contest is being launched for the first time as part of the BIO CEO & Investor Conference, and offers another opportunity for companies to stand out at the event...

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HEALTH

Nature Biotechnology: Outpaced by an Outbreak

The current issue of Nature Biotechnology contains an editorial on the response to the Ebola outbreak that is well-worth the read. The editors discuss some of the barriers which have slowed the development of Ebola medicines...

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BUSINESS OF BIOTECH

Don't Go At It Alone- BIO BizLink and the Evolving R&D Marketplace

BIO, along with OnDeckBiotech, has recently launched a new online platform, BIO BizLink, that facilitates these relationships between biopharma companies and contract service providers...

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AGRICULTURAL BIOTECHNOLOGY

USDA Approves the Next Generation Potato for Commercial Planting

A potato genetically engineered to reduce the amounts of a potentially harmful ingredient in French fries and potato chips has been approved for commercial planting...

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VACCINES

Flu Season: Get Vaccinated Now to Ensure Protection

With flu season – and holiday travel – just around the corner, right now is a good time to get an annual flu vaccine (whether you opt for a shot or the nasal spray), which is the best way to prevent yourself from becoming infected with the flu...

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INTELLECTUAL PROPERTY



Patents Not an Issue in the Fight Against Ebola

As of October 23, 2014, more than 4,900 people have died from the current Ebola outbreak, concentrated in the three West African countries of Sierra Leone, Guinea, and Liberia...

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

U-T San Diego Commentary: Lack of Preparedness to Ebola Is Symptom of Larger Disease

The U-T San Diego published an op-ed by Betrand Liang, CEO of Pfenex Inc., a BIO member, arguing that our current lack of vaccines and therapies for Ebola is a symptom of a larger problem...

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BIO PATIENT & HEALTH ADVOCACY SUMMIT

Charcot-Marie-Tooth Association

At this year's BIO Patient & Health Advocacy Summit, a major theme was the power of partnerships between patient advocacy groups and other stakeholders including industry, government, and academia...



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Boston Globe: Helping veterans find a career path in life sciences

Mike Minoque, chairman and chief executive of Abiomed, a medical device company in Boston that makes tiny heart pumps, leads a program to help veterans transition to the civilian workforce into life sciences careers...

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GMO Answers Concludes Get to Know GMOs Month with People

October is Get to Know GMOs Month, and GMO Answers is bringing you information about biotechnology in agriculture...

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GMO ANSWERS



GMO Answers Addresses Inaccuracies in Consumer Reports Study on GMOs

CBS This Morning recently aired a segment on the Consumer Reports' study on GMOs in packaged food...

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BIO Statement on Maui Farming Ban Initiative



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Voters in Maui have chosen by a narrow margin to impose a ban on farming practices that will ultimately cut jobs and jeopardize the local economy and the future of agriculture in Hawaii...

ENERGY INNOVATION

ENERGY INNOVATION



A Preview of the 2015 ARPA-E Energy Innovation Summit
Feb 9-11



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The U.S. Department of Energy's Advanced Research Projects Agency-Energy is an innovative and collaborative government agency that brings together America's best and brightest scientists, engineers, and entrepreneurs...



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Pacific Rim Summit on Industrial Biotechnology & Bioenergy

The ninth annual Pacific Rim Summit on
Industrial Biotechnology and Bioenergy
is the original conference dedicated
solely to the growth of the industrial
biotechnology and bioenergy sectors in
North America and the Asia-Pacific
region. The 2014 event will be held in
San Diego, California from December 7-
9, 2014 at the Westin Gaslamp Quarter...

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03.24.15

The BIO CEO & Investor Conference is the largest investor conference focused on emerging publicly traded and select private biotech companies. Because our mission is to support industry-wide success, we co-hosted by the Biotechnology Industry Organization (BIO), BioCentury Publications and the Japan Bioindustry Association (JBA), brings together the global biotechnology and pharmaceutical industry to explore licensing and research collaborations in the current Asia-Pacific business and policy environments...

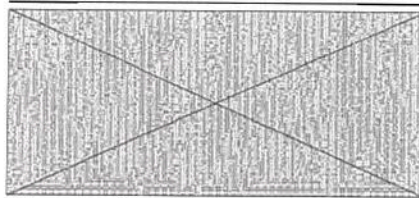
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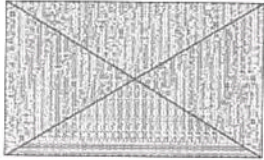
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From: Algae Biomass Organization
Sent: Wed 11/19/2014 8:32:37 PM
Subject: Algae InSight: DOE Made How Much On Its Investments In Clean Energy?



Algae InSight

Edition: November 19, 2014

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Executive Director's Report

The Department of Energy's Loan Programs Office excited many of its supporters and stunned many of its detractors this month with a report that the agency's program to finance new energy technologies is expected to take in some \$5 billion in interest payments-far exceeding many expectations and throwing cold water on claims that the program was a failure. The financial solvency of this program is good news for those properly concerned about oversight, but take a look at the more tangible accomplishments of the projects DOE supported:

- 56,000 jobs created or saved
- 14 million metric tons of CO2 emissions prevented
- Energy for more than 1 million homes generated
- 900 million gallons of gasoline saved
- Pollution reductions equivalent to taking 3 million cars off the road

Remarkably, these are the benefits of *just one clean energy research and development program*.

Imagine the gains to our economy, or environment and our energy security when these technologies are fully deployed.

There are several opportunities to keep this momentum, not only for algae but an entire range of innovative technologies.

First, Congress will soon be voting on several tax credits that apply to advanced biofuels. These credits help advance the commercialization of new biofuel technologies as producers ramp up production, and give investors the confidence of a level playing field with other fuels.

Second, the Environmental Protection Agency is considering final rules for its Clean Power Plan. Explicitly recognizing Carbon Capture and Utilization (CCU) technologies as approved emissions reduction strategies would create a surge in confidence among investors and utility regulators interested in using CO2 to grow algae. This confidence would accelerate the development and deployment of algae cultivation technologies and projects that can reduce greenhouse gas emissions and become a source of renewable commodity chemicals, fuels, food, and feed, as well as high-value products such as nutraceuticals, pharmaceuticals, cosmetics and more.

Both of these potential policy avenues could have impacts many times that of the successful DOE loan programs.

To help make these impacts real we need algae supporters to communicate with policy makers more often. Make phone calls. Visit Congressional offices. Write letters.

As someone who regularly meets with members of Congress and agency staff I can assure you that such letters are not only read, but that they are actively sought by those that want to support algae research and development.

And you can bet that opponents of our industry are mobilizing their own letter writing campaign.

ABO has set up a [new tool that makes submitting your own comments to the EPA easy](#). Take one minute and add your voice. While you are at it, you can also look up your own elected officials' contact info.

Imagine power plants that operate next to algae farms, recycling CO2 that would otherwise go into our atmosphere into dozens of different products. We'd be able to free up agricultural lands, relieve pressure on freshwater supplies, and reduce greenhouse gas emissions.

Your voice may seem like one in millions, but this issue is getting some special attention and every person that voices support for carbon utilization is getting noticed in Washington, DC.

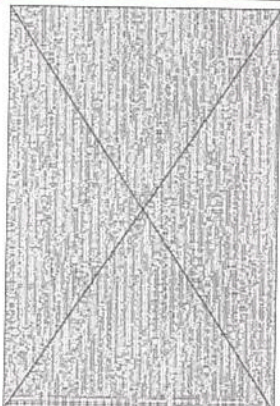
So please take a minute and add yours to the growing voice of Algae Nation.

Sincerely,

Matt Carr

Executive Director

In Memoriam: Mary Rosenthal, ABO's First Executive Director



November 1st, 2014 was a sad day for the algae industry with the passing of Mary Rosenthal, ABO's first executive director, after a battle with cancer.

Mary took the reins at ABO during a time - 2009 - when she wasn't sure if there would even be enough funding for long term employment. Back then, algae was just coming on to the national radar, and ABO had been formed to bring this fledgling industry together.

No stranger to evangelizing sustainable products and materials from her time at NatureWorks, Mary rolled up her sleeve and was instrumental in developing new members, transforming the annual Algae Biomass Summit into the premier industry conference, and becoming the voice of the algae industry.

During her tenure the organization grew to more than 200 members representing a wide cross section of industry. Under Mary's leadership the ABO also achieved success on numerous policy initiatives on the Hill, including getting algae biofuels to qualify for the \$1.01 tax credit for the first time ever.

Mary was an inspiration to many as she continued to fight for algae even while fighting cancer. She will be missed.

[Biofuels Digest](#) recalled [Mary's contributions](#) to the industry and the loss felt by those that had the privilege of working with her. And [Tim Portz at Biomass Magazine](#) writes [a moving tribute](#) to Mary in an article that has also attracted comments from many that have worked with her over the years.

For donations and memorials, please send them in honor of Mary to the Minnesota Ovarian Cancer Alliance (MOCA). Their address is 4604 Chicago Ave S, Minneapolis, MN 55407 and their phone number is 612-822-0500. You are welcome to instead send these donations and memorials to your local Ovarian Cancer Society.

Send the EPA Your Own Comments

Speak up in support of algae technology in the United States!

Submit Your Facility for the Algae Industry Project Book

[submit ABO's pre-drafted letter](#)

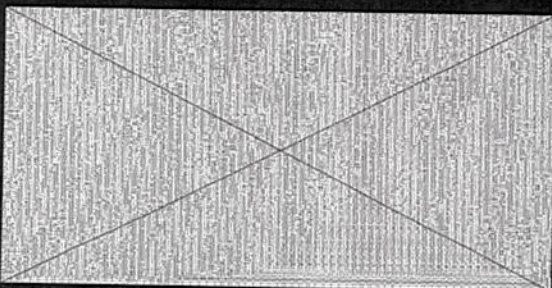
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[The Digest's Hottest Companies - Algae is on the List](#)
[Algae on the Runway \(but not the airport\)](#)
[Traffic Makes the Algae Grow](#)

5th Annual Clean Energy Challenge

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EPA Calls for Nominations for 20th Annual Presidential Green Chemistry Challenge Award

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New Members

Member News

Solaplast Formulates Plastic out of Algae

Industry News

[Muradeli produces crude oil from algae at demonstration plant](#)

[NREL: Reviving algae from the \(almost\) dead](#)

[2 Senate Democrats explore how to protect coal jobs and the environment](#)

[Health Enhancement Products, Inc. Changes to ZIVO Bioscience, Inc. Effective Monday, November 10, 2014. Capping a Two-Plus Year Transition to Biotechnology Business Model](#)

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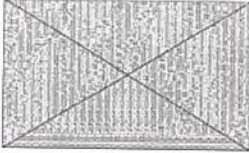
[This algae farm eats highway pollution](#)

[Algae Biomass Organization gets New Leaders](#)

[Mary Rosenthal, the Algae Biomass Organization's first executive director, dies at 56](#)

Join ABO

Soon. Your Clothes Could Be Made By Algae



As we continue to promote the development of commercial markets for sustainable products derived from algae, we invite you to join us in our efforts by becoming a member of the Algae Biomass Organization. As the trade association for the industry, we act as a voice for the industry to the public, media and policy makers while also representing individuals and companies across the value chain. As an ABO member, you'll have access to a wide range of services and information, including:

- Representation in ABO's policy initiatives with policy makers in Congress and at key federal agencies, including the USDA, EPA and DOE;
- Regular industry updates and issue alerts via member-only communications;
- Opportunity to participate in ABO committees;
- Results from our annual industry survey;
- Access and input to the ABO's Technical Standards documents;
- Participation in members-only events, webinars, briefings and networking opportunities;
- Discounted registration for ABO-hosted industry events.

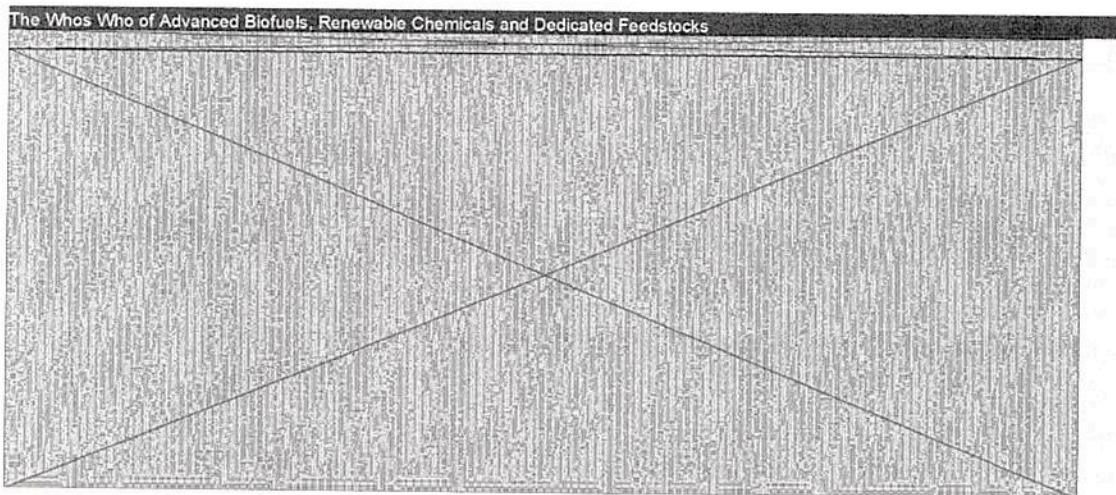
For questions about membership in the Algae Biomass Organization and its benefits, please feel free to visit our [website](#) or call toll-free at 1-877-531-5512.

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From: Brent Erickson
Sent: Tue 11/18/2014 5:01:02 PM
Subject: Renewable Chemicals, Advanced Biofuels and Dedicated Feedstocks



More Leaders in Advanced Biofuels, Renewable Chemicals and Dedicated Feedstocks Added to Program

Where can you learn about the critical issues facing the industry, discover innovative technologies that have entered the market and network with over 400 leaders from around the Pacific Rim? At the BIO Pacific Rim Summit on Industrial Biotechnology this December 7-9 in sunny San Diego. More speakers have been added to the program including:

Ajarin Pattanapanchai, **Thailand Investment Board**

Ami Ben-Amotz, **NBT Ltd**

Alan Shaw, **Calysta**

Jamie Levine, **Sapphire Energy**

Jeff Martin, **Yulex**

Margaret McCormick, **Matrix Genetics**

Martin Sabarsky, **Cellana**

Mark Patel, **McKinsey & Company**

Rick Eno

Susan Jenkins, **Energy Biosciences Institute (EBI)**

Timothy Volk, **SUNY College of Environmental Science and Forestry**

Plus: Debbie Yaver, **Novozymes**, will accept the inaugural Rosalind Franklin Award for Innovation in Industrial Biotechnology, an award supported by the **Rosalind Franklin Society**

[View the full Plenary Program](#)

Brandon Morrison, **Duke Center for Sustainability & Commerce**

Brittany Syz, **Oberon Fuels**

For more information, go to bio.org/pacrim
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